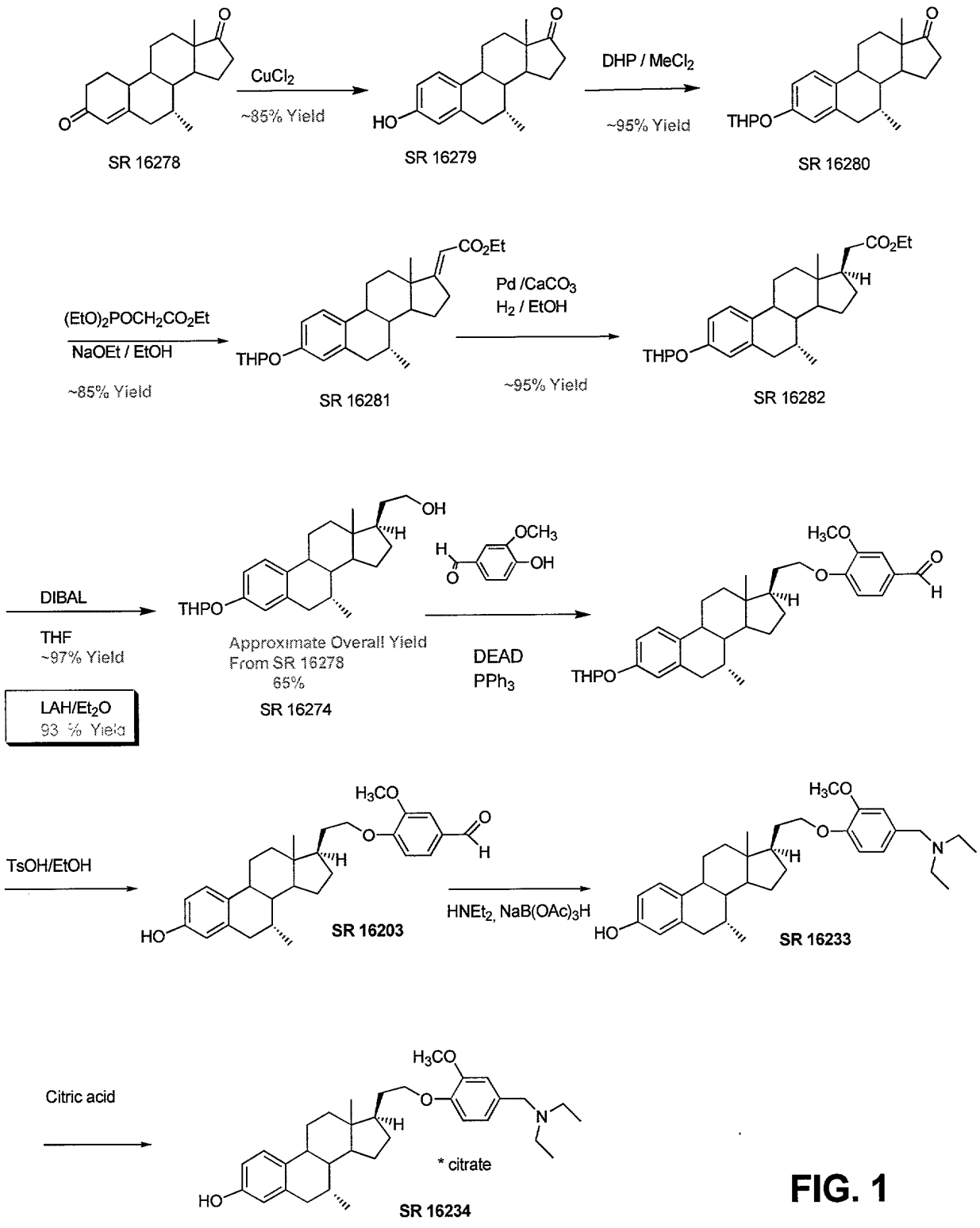

CuCl2
~85% Yield
DHP / MeCl2
~95% Yield
SR 16278
SR 16279
SR 16280
(EtO)2POCH2CO2Et
NaOEt / EtOH
~85% Yield
Pd /CaCO3
H2 / EtOH
~95% Yield
SR 16281
SR 16282
DIBAL
THF
~97% Yield
LAH/Et2O
93 % Yield
Approximate Overall Yield
From SR 16278
65%
SR 16274
DEAD
PPh3
TsOH/EtOH
SR 16203
HNEt2, NaB(OAc)3H
SR 16233
Citric acid
* citrate
SR 16234

FIG. 1

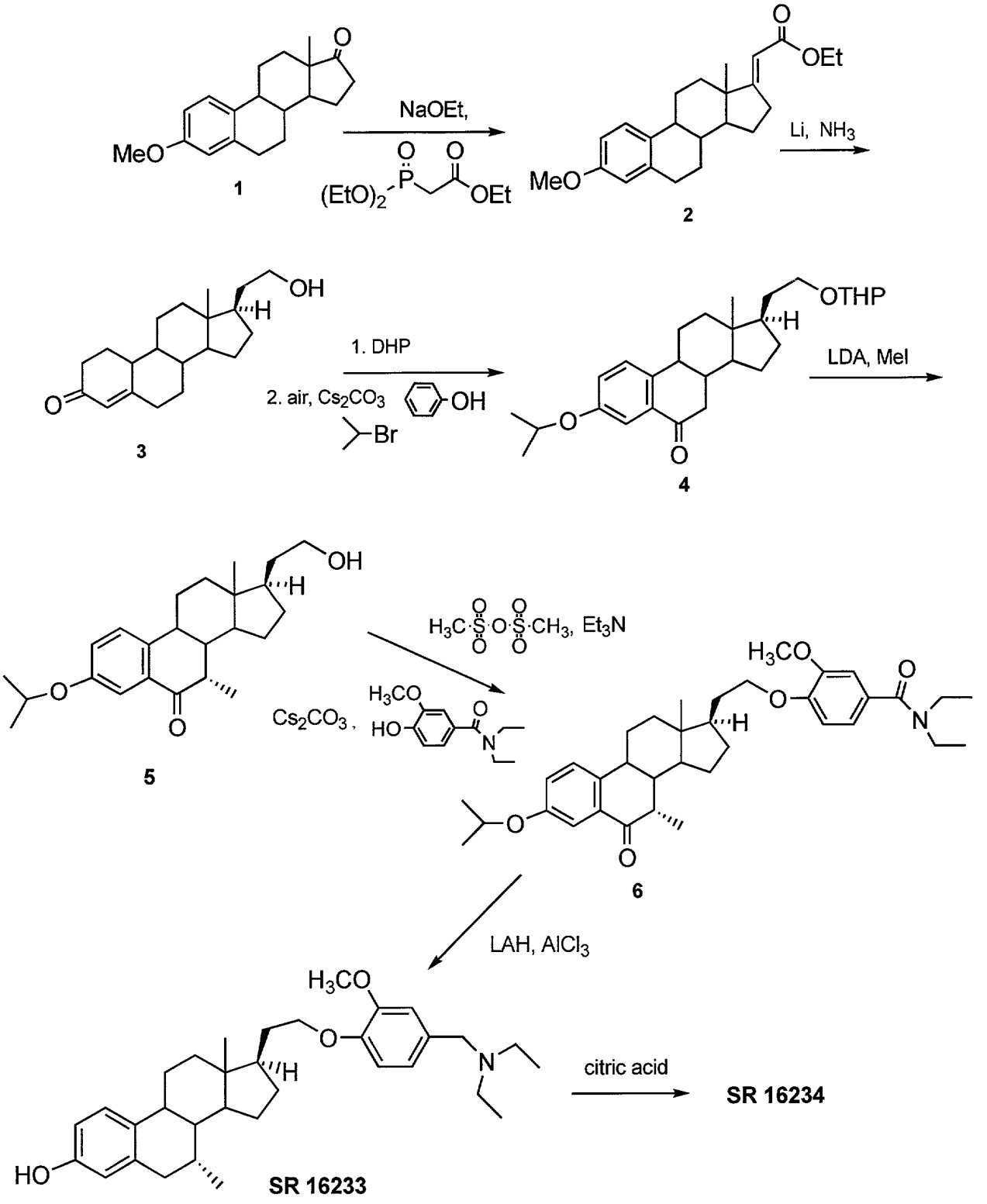

MeO
1
NaOEt,
(EtO)2P
OEt
OEt
MeO
2
Li, NH3
OH
H
O
3
1. DHP
2. air, Cs2CO3
OH
Br
OTHP
H
O
O
4
LDA, MeI
OH
H
O
O
5
H3C·S·O·S·CH3, Et3N
Cs2CO3,
H3CO
HO
N
H3CO
O
N
H
O
O
6
LAH, AlCl3
H3CO
O
N
H
HO
SR 16233
citric acid
SR 16234

FIG. 2

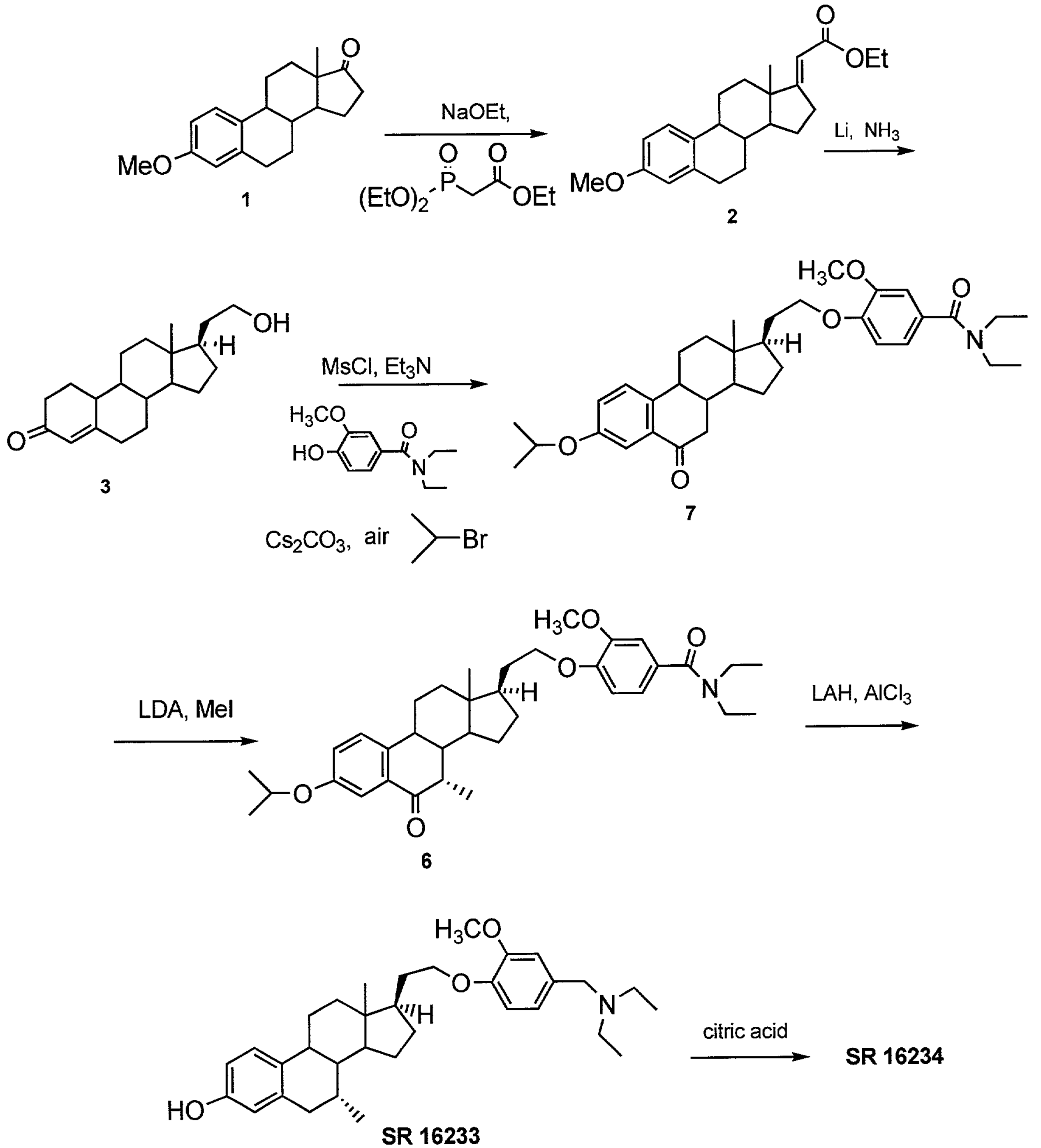

MeO
1
NaOEt,
(EtO)2 P OEt
2
OEt
Li, NH3
OH
H
3
MsCl, Et3N
H3CO
HO
N
Cs2CO3, air
Br
7
LDA, MeI
6
LAH, AlCl3
SR 16233
citric acid
SR 16234

FIG. 3

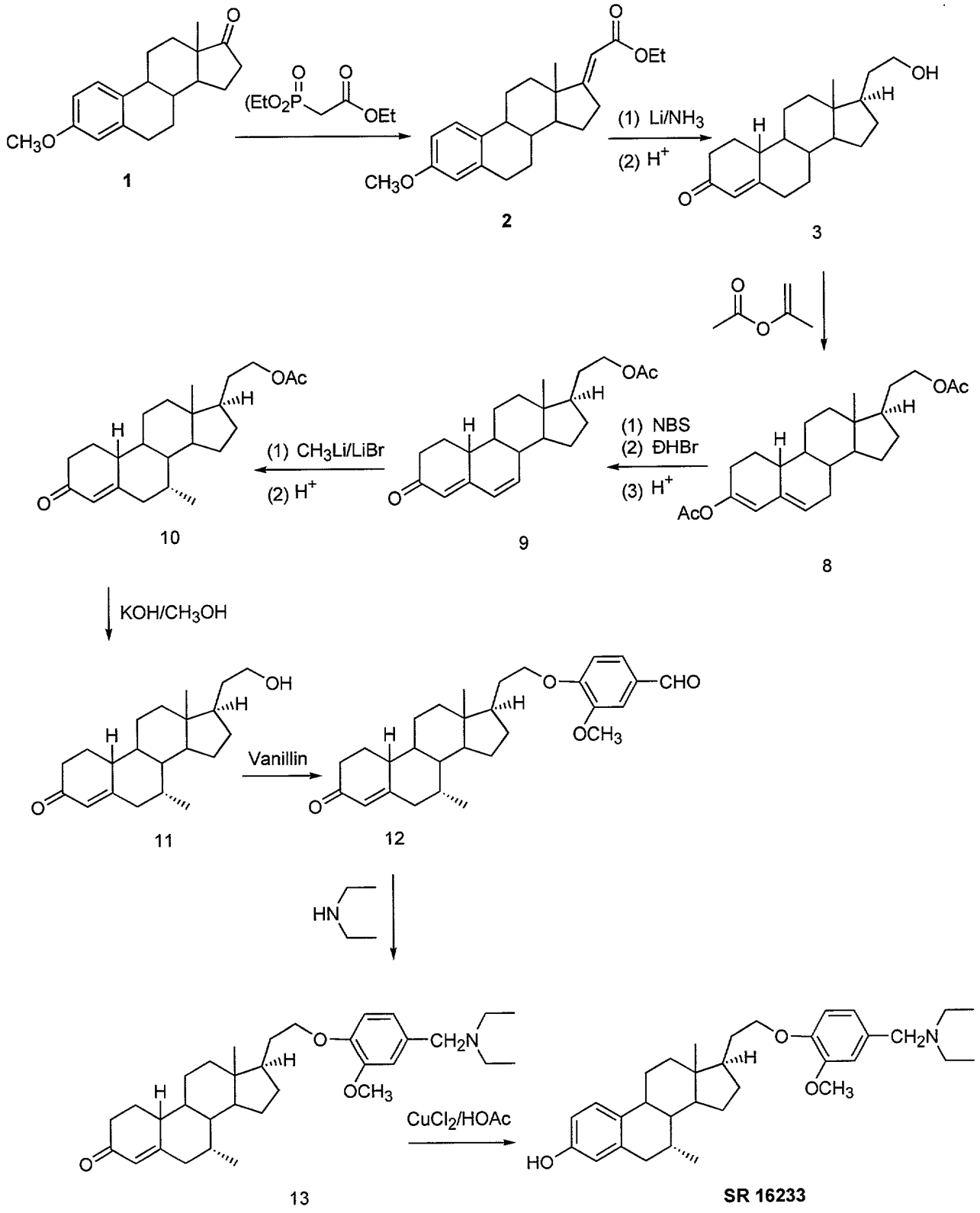

1
2
3
8
9
10
11
12
13
SR 16233
(1) Li/NH3
(2) H+
(1) NBS
(2) ĐHBr
(3) H+
(1) CH3Li/LiBr
(2) H+
KOH/CH3OH
Vanillin
CuCl2/HOAc

FIG. 4

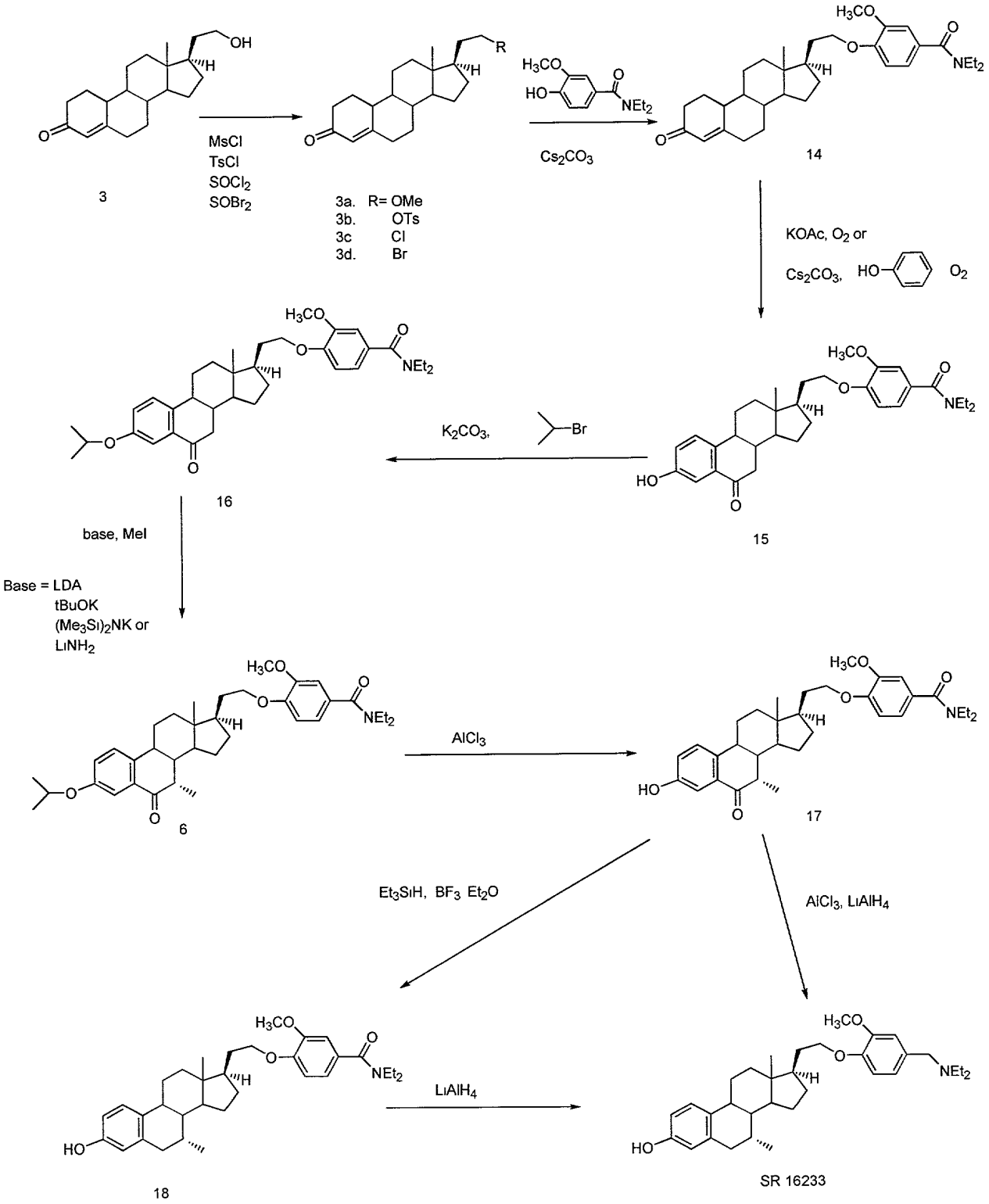

3
MsCl
TsCl
SOCl2
SOBr2
3a. R= OMe
3b. OTs
3c Cl
3d. Br
Cs2CO3
14
KOAc, O2 or
Cs2CO3, HO O2
15
K2CO3,
Br
16
base, MeI
Base = LDA
tBuOK
(Me3Si)2NK or
LiNH2
6
AlCl3
17
Et3SiH, BF3 Et2O
AlCl3, LiAlH4
18
LiAlH4
SR 16233

FIG. 5

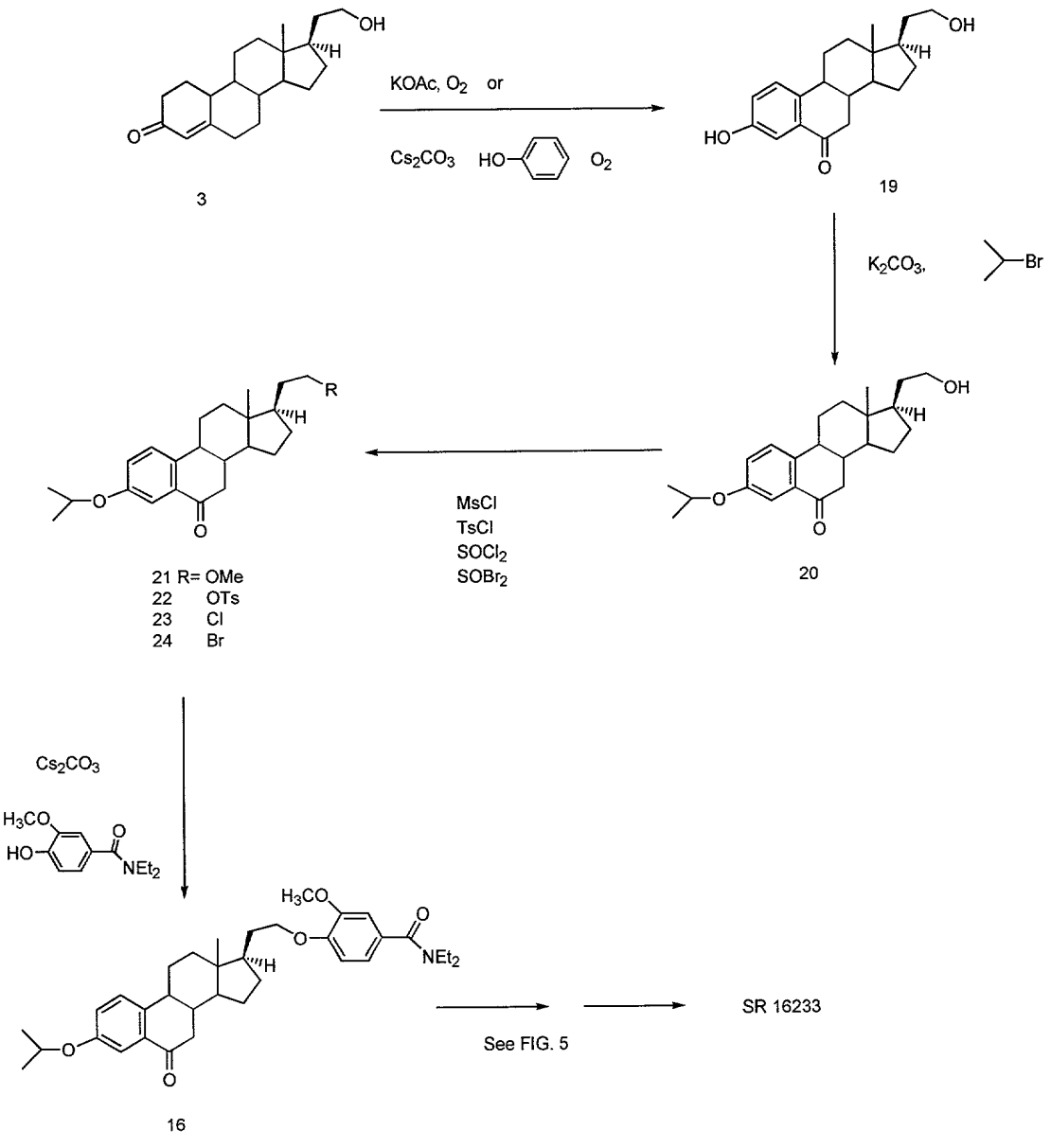

KOAc, O2 or
Cs2CO3
HO
O2
3
19
K2CO3,
Br
MsCl
TsCl
SOCl2
SOBr2
21 R= OMe
22 OTs
23 Cl
24 Br
20
Cs2CO3
H3CO
HO
NEt2
16
See FIG. 5
SR 16233

FIG. 6

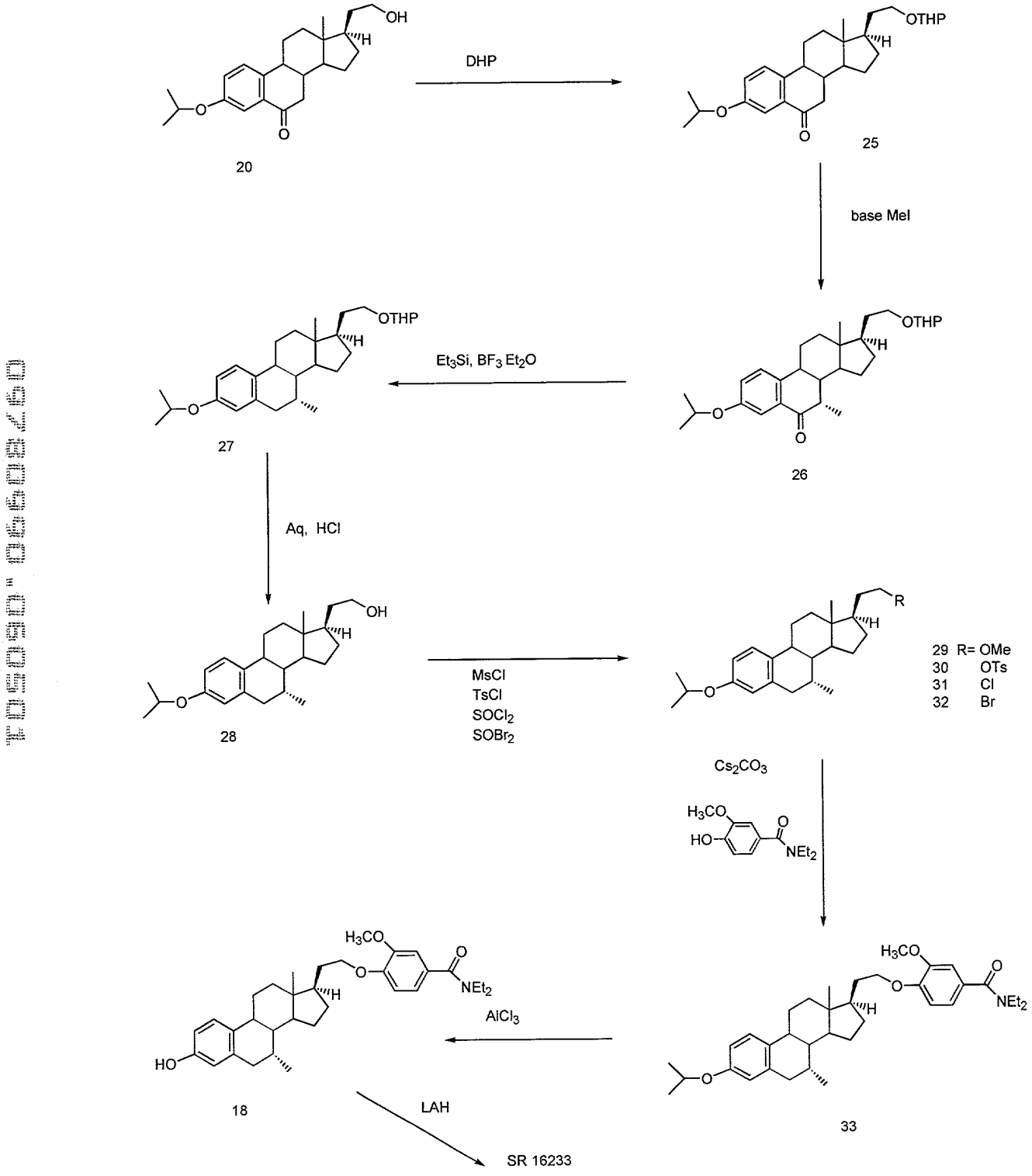

OH
H
O
20
DHP
OTHP
H
O
25
base MeI
OTHP
H
O
26
Et3Si, BF3 Et2O
OTHP
H
O
27
Aq, HCl
OH
H
O
28
MsCl
TsCl
SOCl2
SOBr2
R
H
O
29 R= OMe
30 OTs
31 Cl
32 Br
Cs2CO3
H3CO
HO
O
NEt2
H3CO
O
NEt2
H
O
33
AlCl3
H3CO
O
NEt2
H
HO
18
LAH
SR 16233

FIG. 7

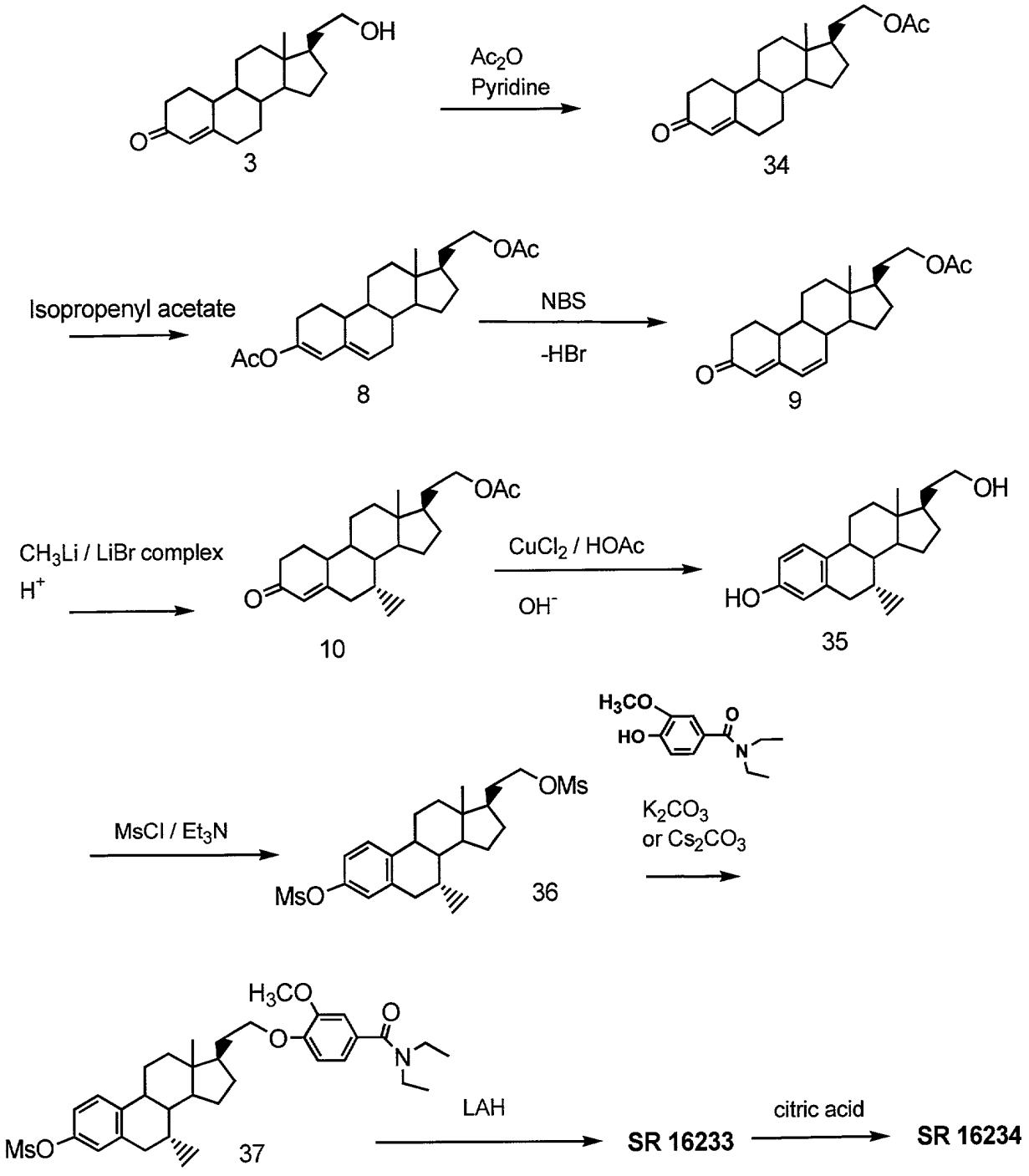

OH
O
3
Ac2O
Pyridine
OAc
O
34
Isopropenyl acetate
OAc
AcO
8
NBS
-HBr
OAc
O
9
CH3Li / LiBr complex
H+
OAc
O
10
CuCl2 / HOAc
OH-
OH
HO
35
H3CO
HO
O
N
OMs
MsO
36
MsCl / Et3N
K2CO3
or Cs2CO3
H3CO
O
O
N
MsO
37
LAH
SR 16233
citric acid
SR 16234

FIG. 8

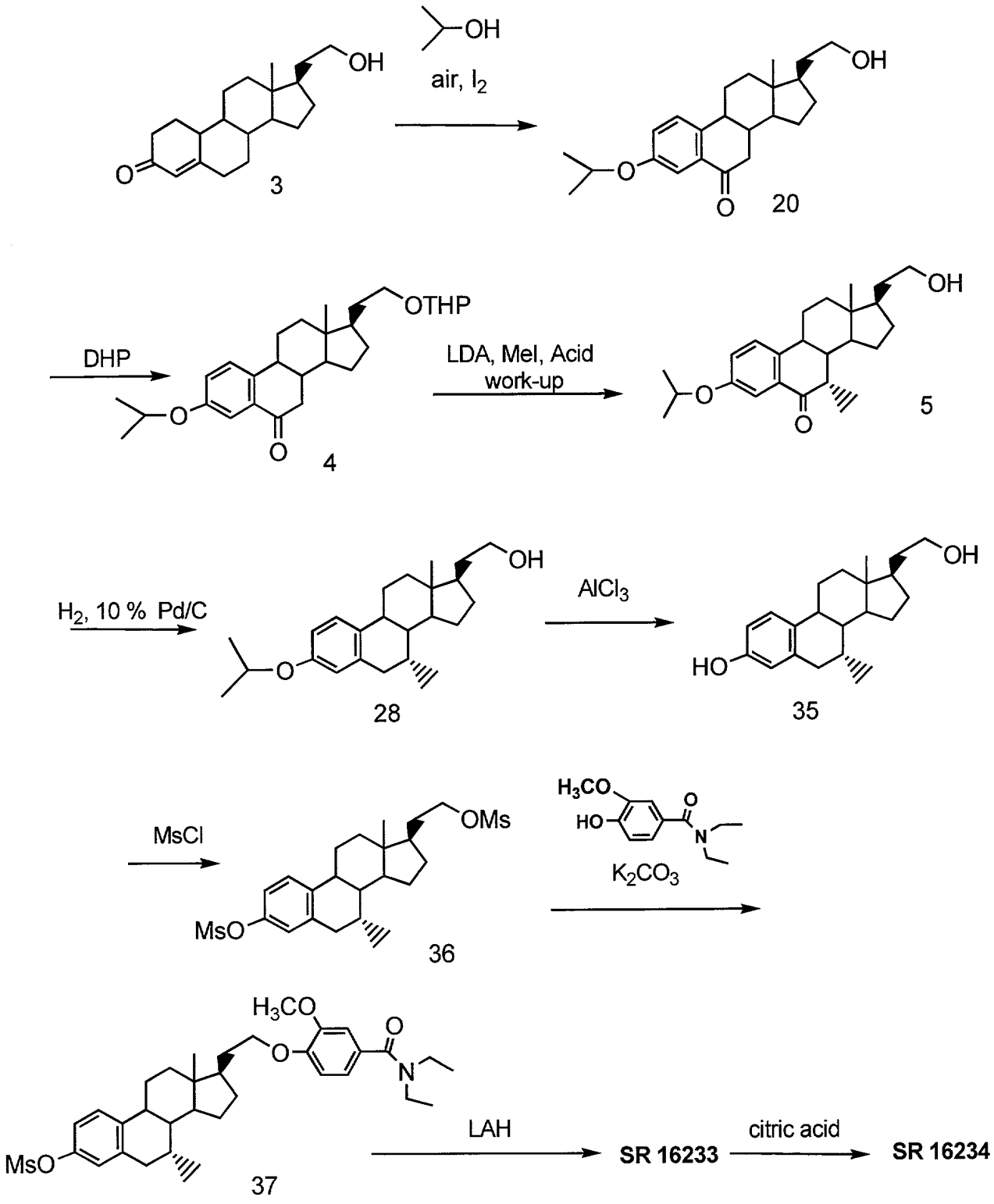

OH
air, I_2
OH
3
O
20
OTHP
DHP
LDA, MeI, Acid
work-up
OH
O
O
4
5
H_2, 10 % Pd/C
OH
$AlCl_3$
OH
28
HO
35
MsCl
OMs
H_3CO
HO
O
N
K_2CO_3
MsO
36
H_3CO
O
O
N
MsO
37
LAH
SR 16233
citric acid
SR 16234

FIG. 9

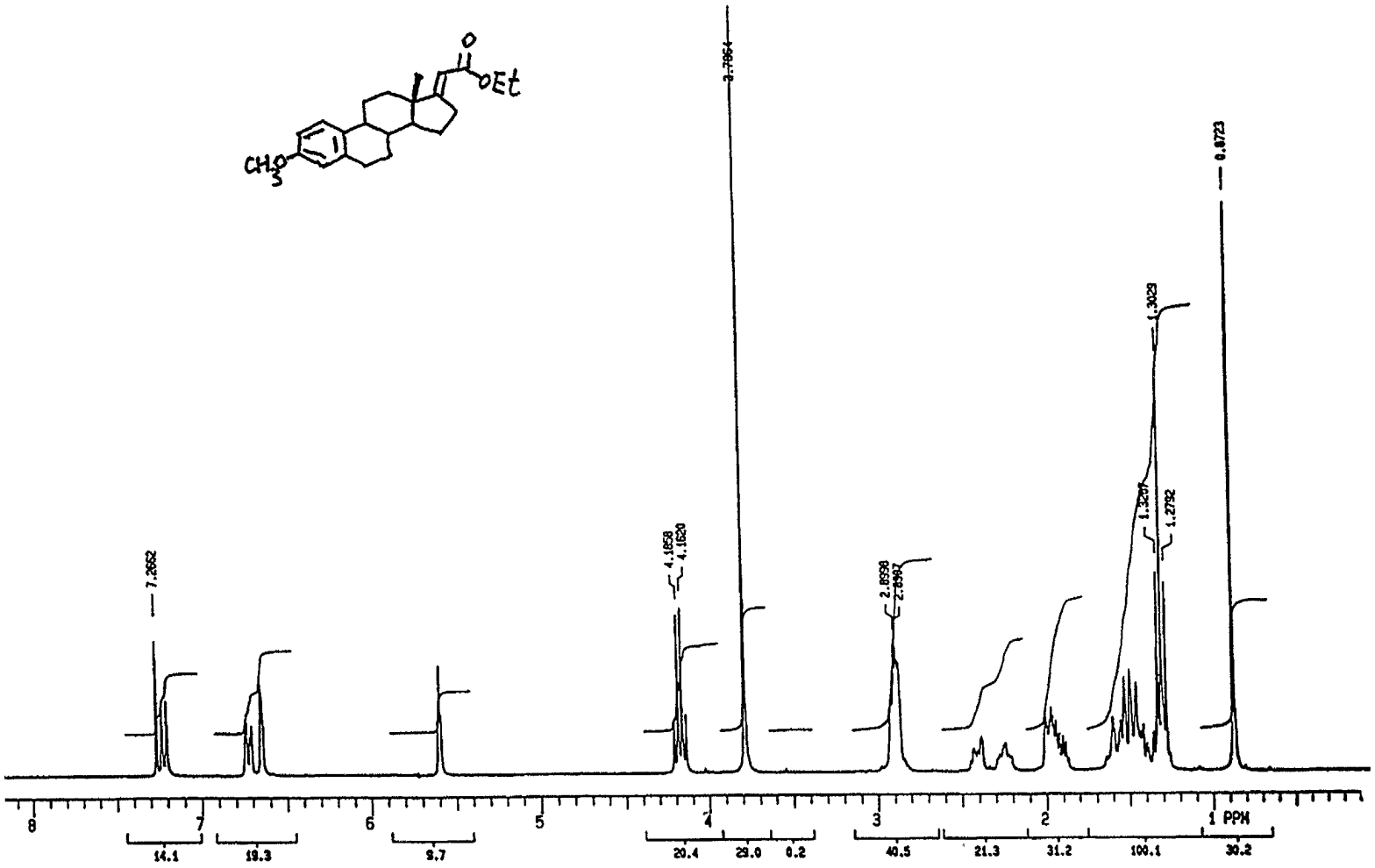

O
OEt
CH3O
7.2662
4.1858
4.1620
3.7864
2.8998
2.8592
1.3029
1.3207
1.2792
0.8723
8
7
6
5
4
3
2
1 PPM
14.1
19.3
9.7
20.4
29.0
0.2
40.5
21.3
31.2
100.1
30.2

FIG. 10

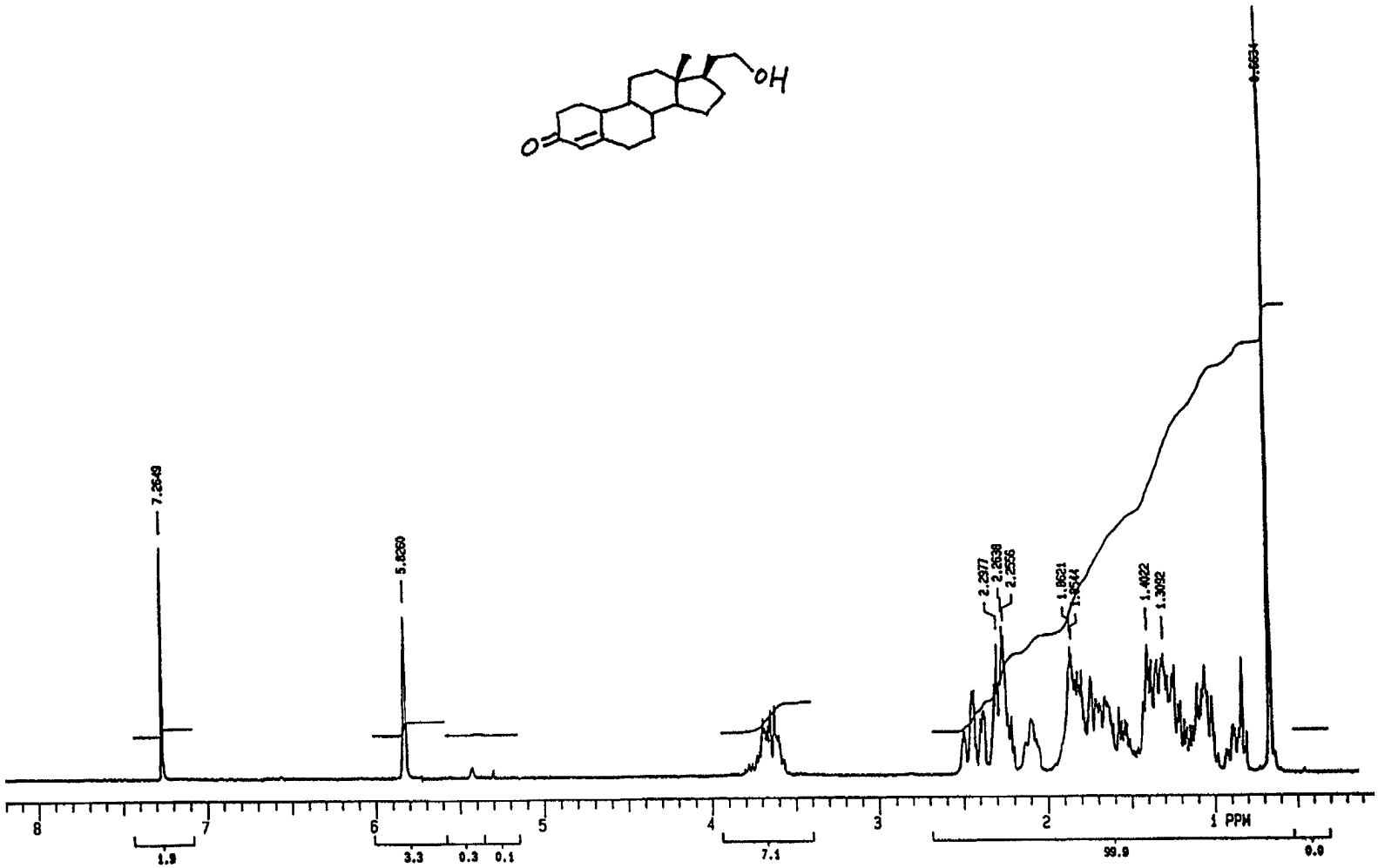

OH
O
7.2649
5.8259
2.2977
2.2638
2.2256
1.8621
1.8544
1.4022
1.3092
8
7
6
5
4
3
2
1 PPM
1.0
3.3
0.3
0.1
7.1
99.9
0.0

FIG. 11

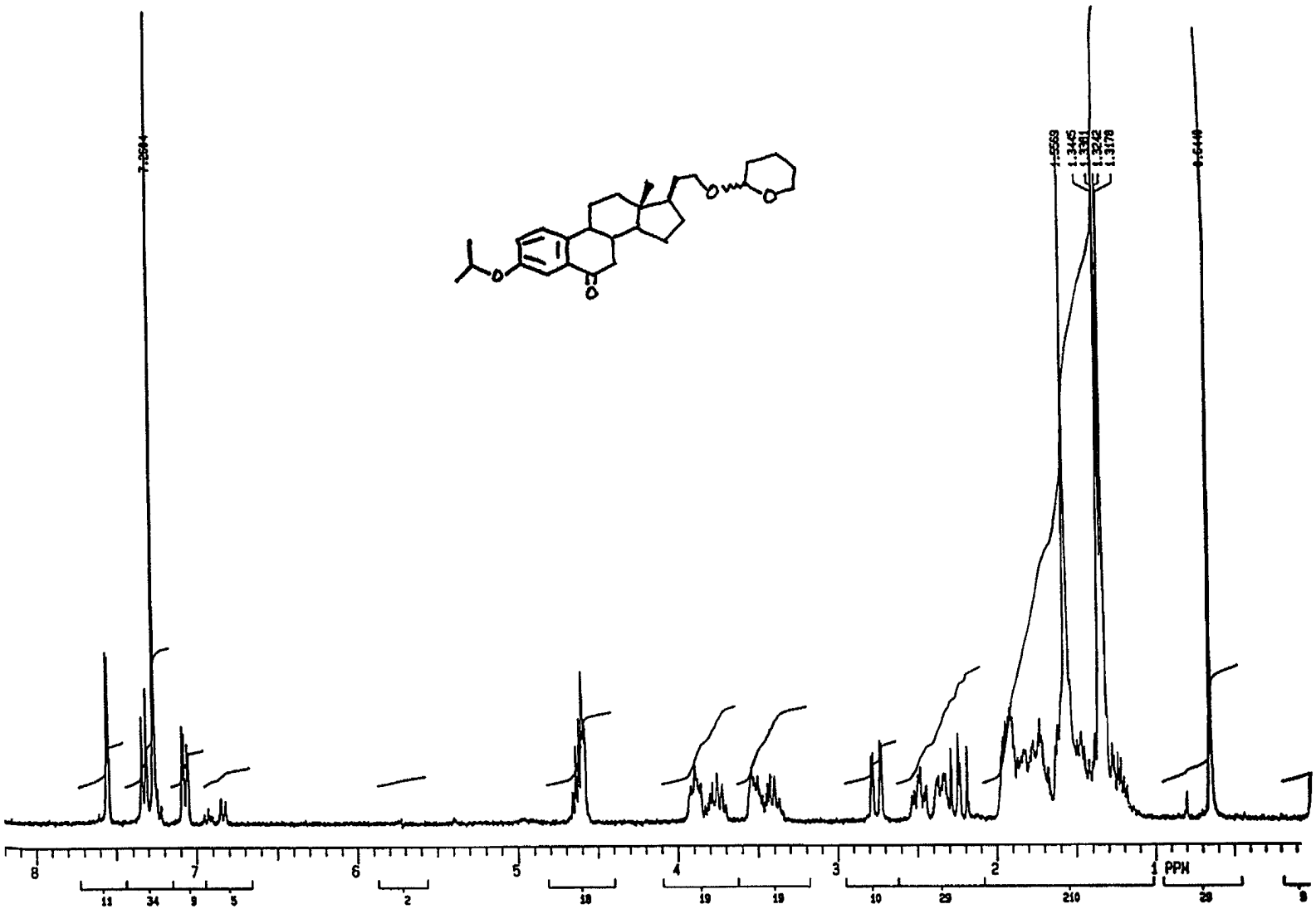


FIG. 12

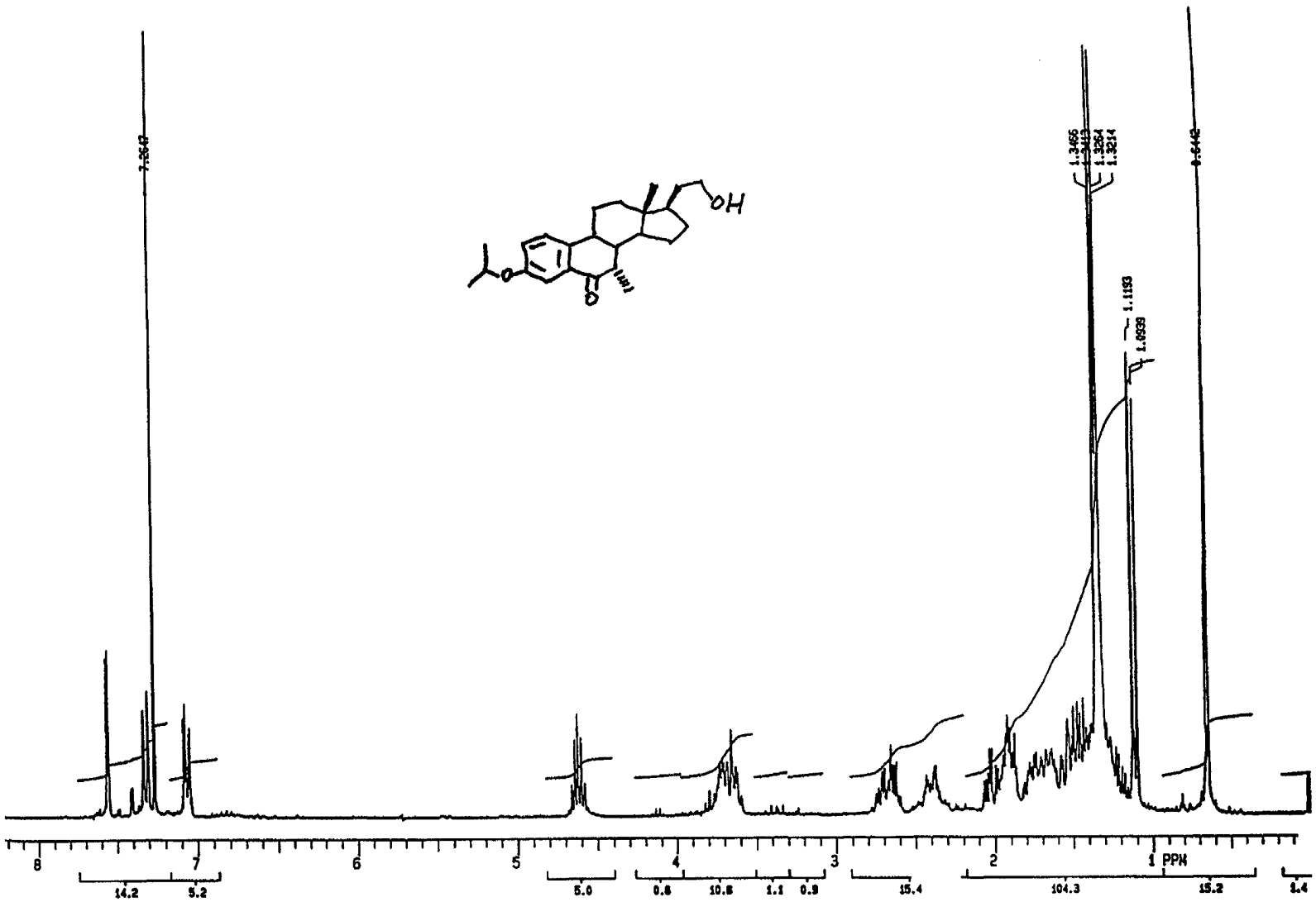

OH
7.3648
1.3466
1.3413
1.3364
1.3314
1.1193
1.0939
0.6442
8
7
6
5
4
3
2
1 PPM
14.2
5.2
5.0
0.8
10.8
1.1
0.9
15.4
104.3
15.2
3.4

FIG. 13

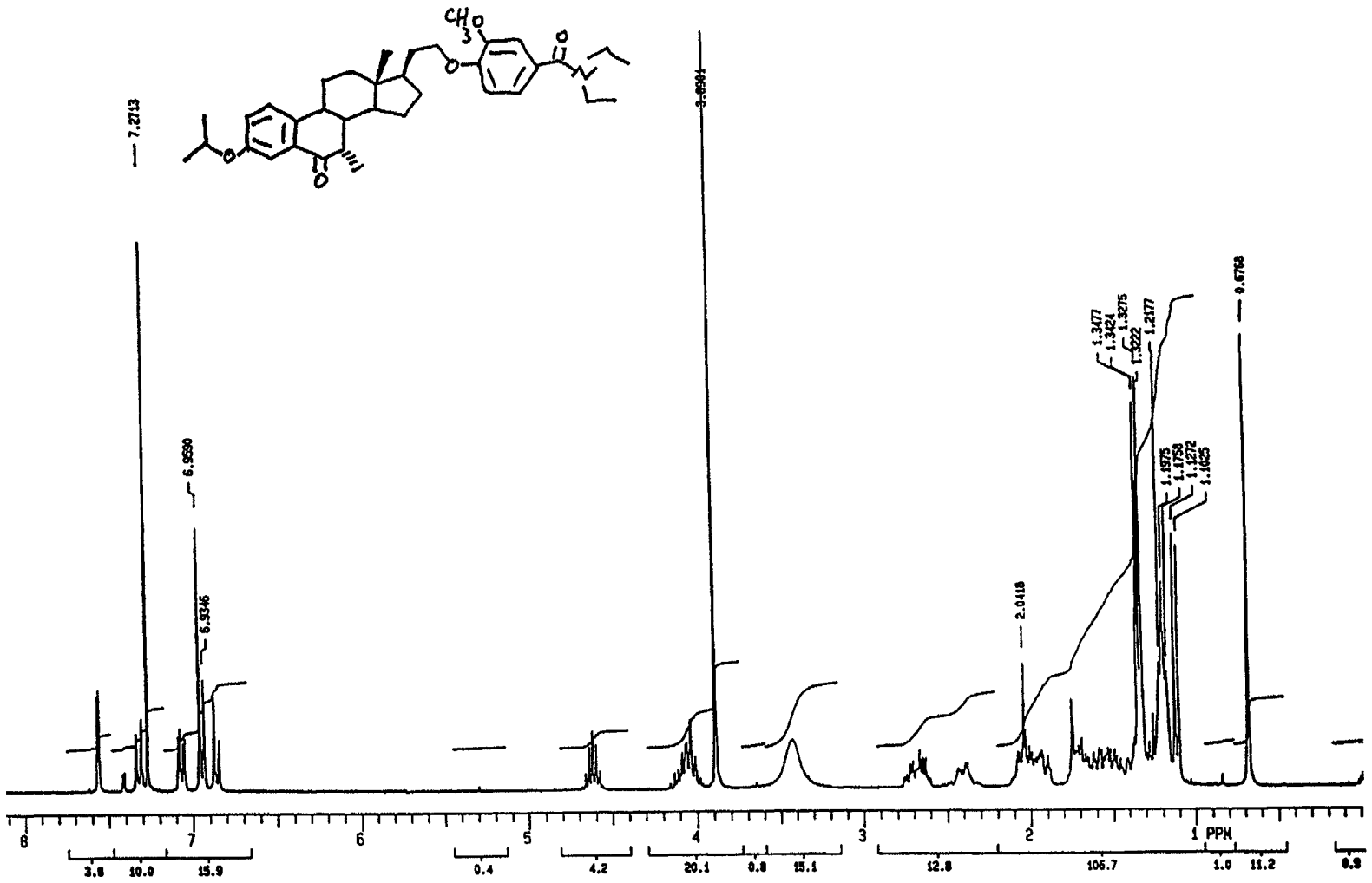

7.2713
6.9530
6.9346
3.6901
2.0419
1.3477
1.3421
1.3275
1.3222
1.2177
1.1975
1.1758
1.1272
1.1025
0.6758
8
7
6
5
4
3
2
1 PPM
3.8
10.9
15.9
0.4
4.2
20.1
0.8
15.1
12.8
106.7
1.0
11.2
0.9

FIG. 14

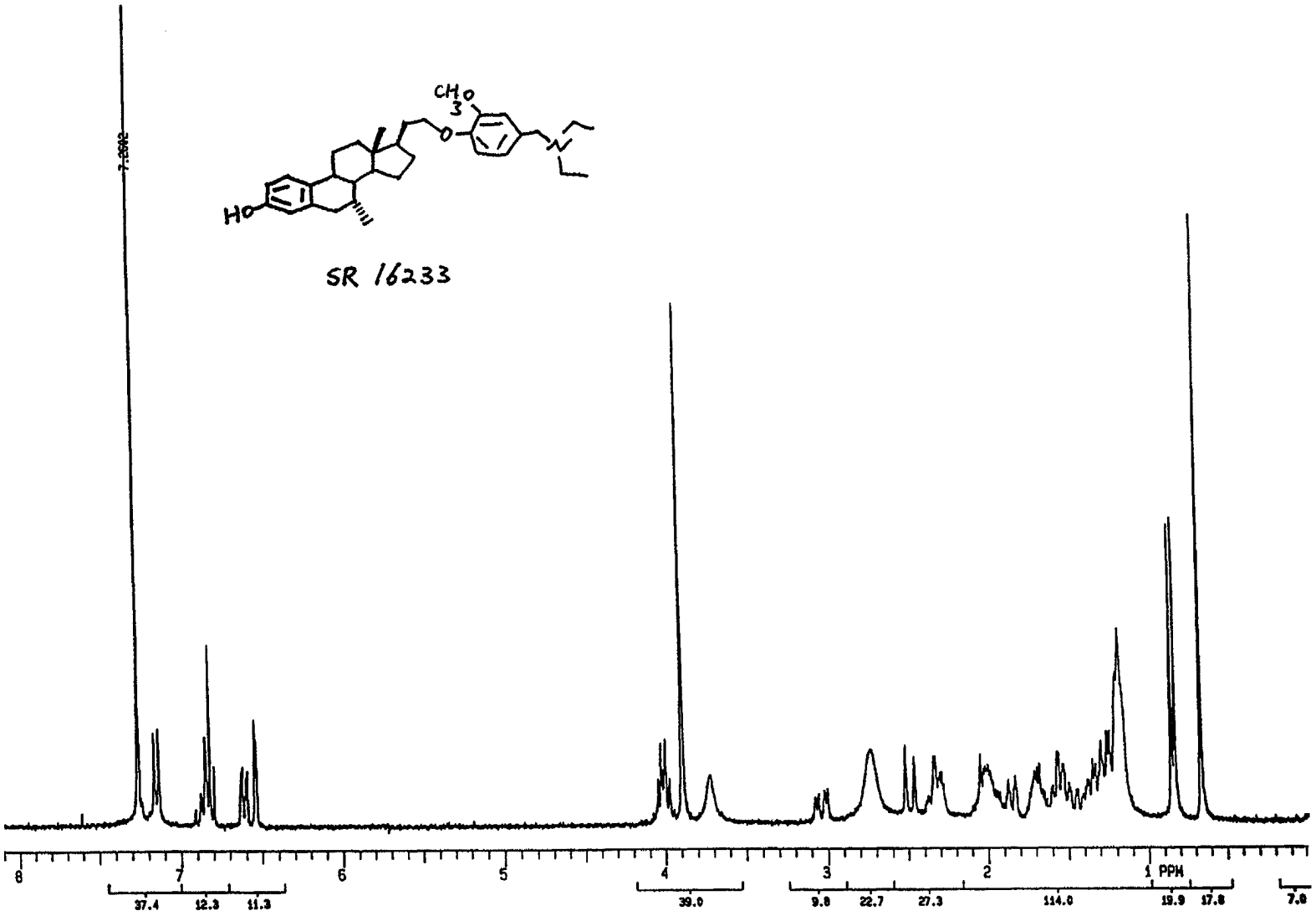
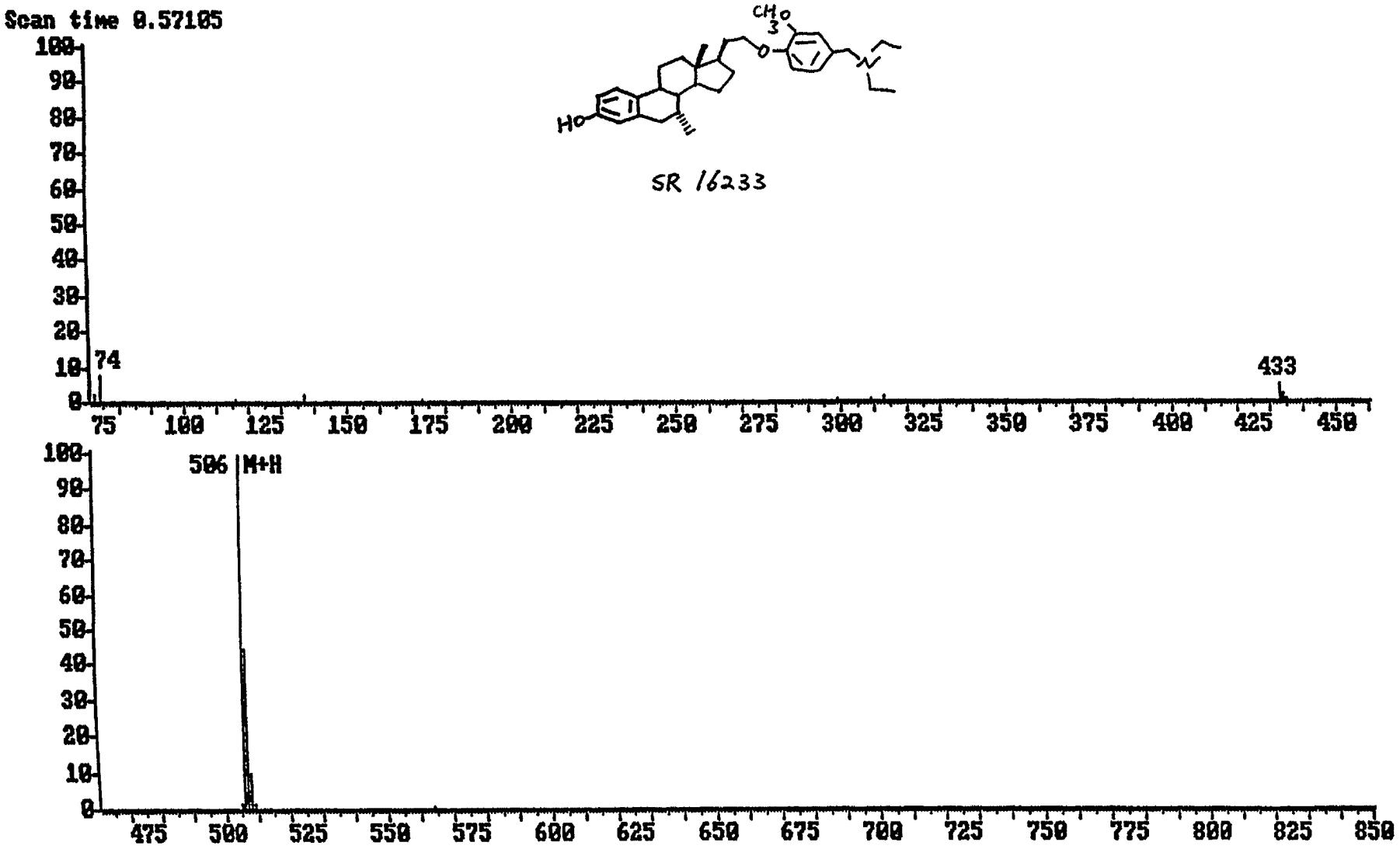

CH3O
HO
SR 16233
8
7
6
5
4
3
2
1 PPM
37.4
12.3
11.3
39.0
9.8
22.7
27.3
114.0
19.9
17.8
7.0

FIG. 15



SR 16233

FIG. 16

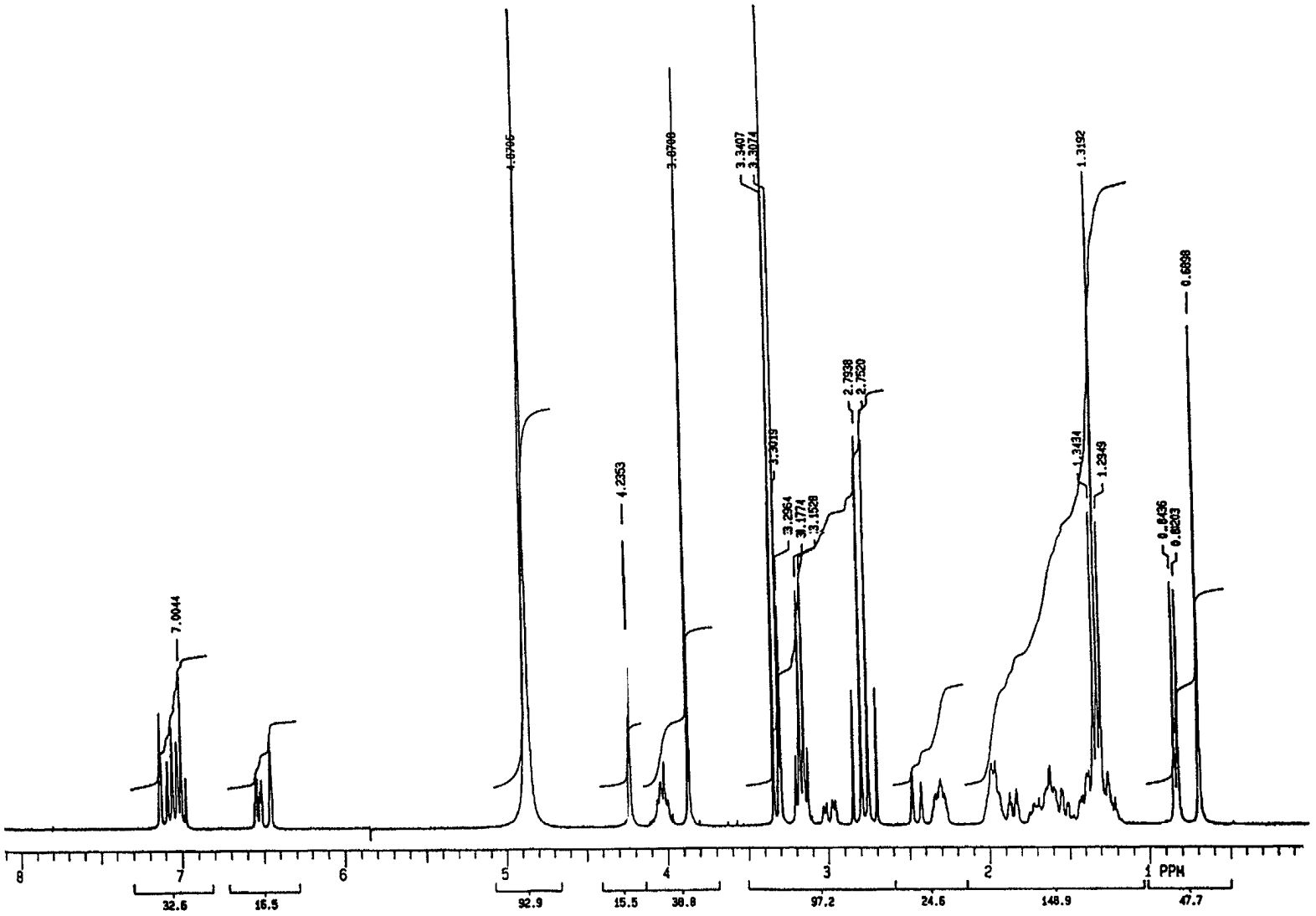

7.0044
4.2353
4.0796
3.8788
3.3407
3.3074
3.3019
3.2864
3.1774
3.1528
2.7938
2.7520
1.3434
1.3192
1.2348
0.8436
0.8203
0.6898
8
7
6
5
4
3
2
1 PPM
32.6
16.5
92.9
15.5
38.8
97.2
24.6
148.9
47.7

FIG. 17

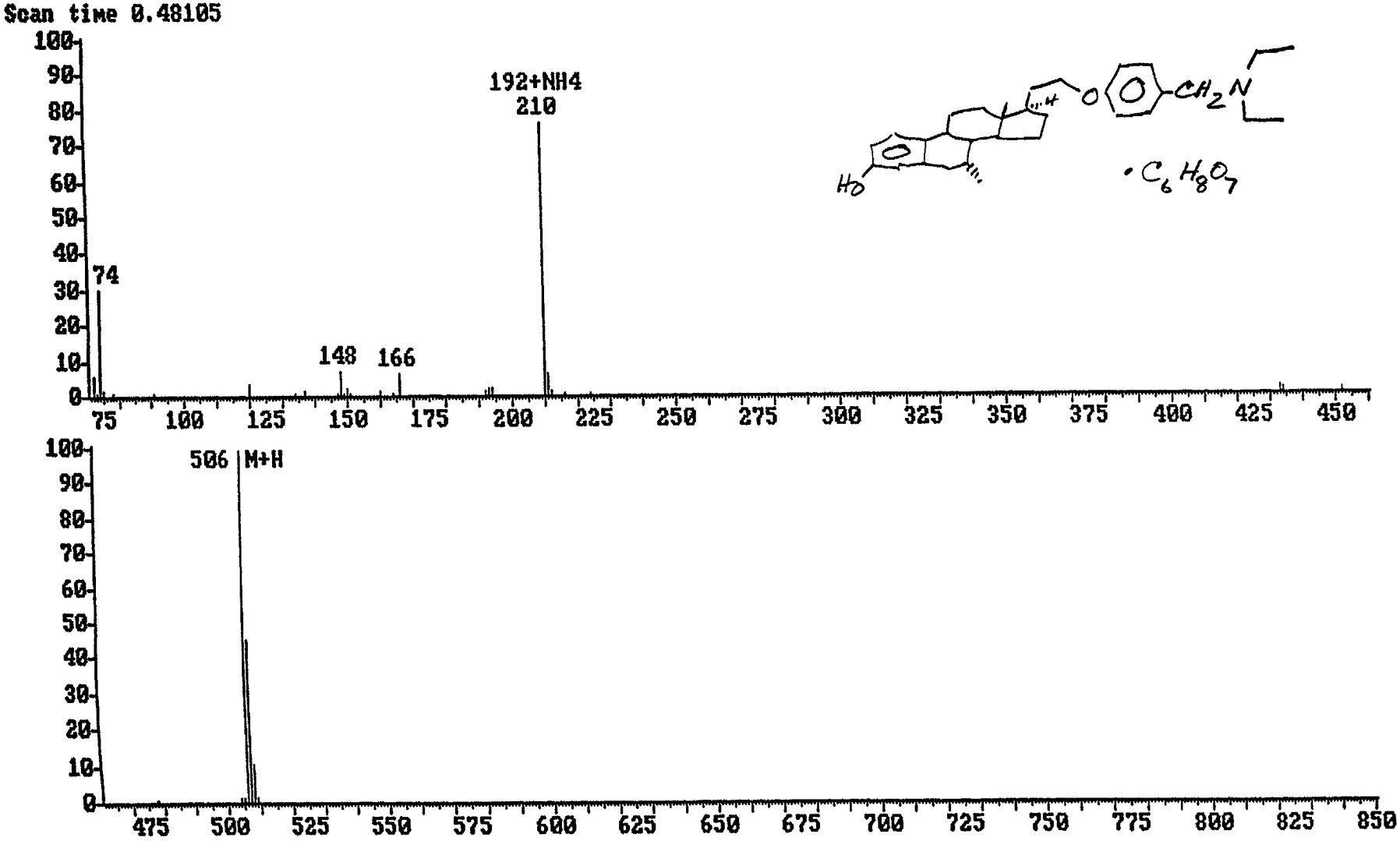


FIG. 18

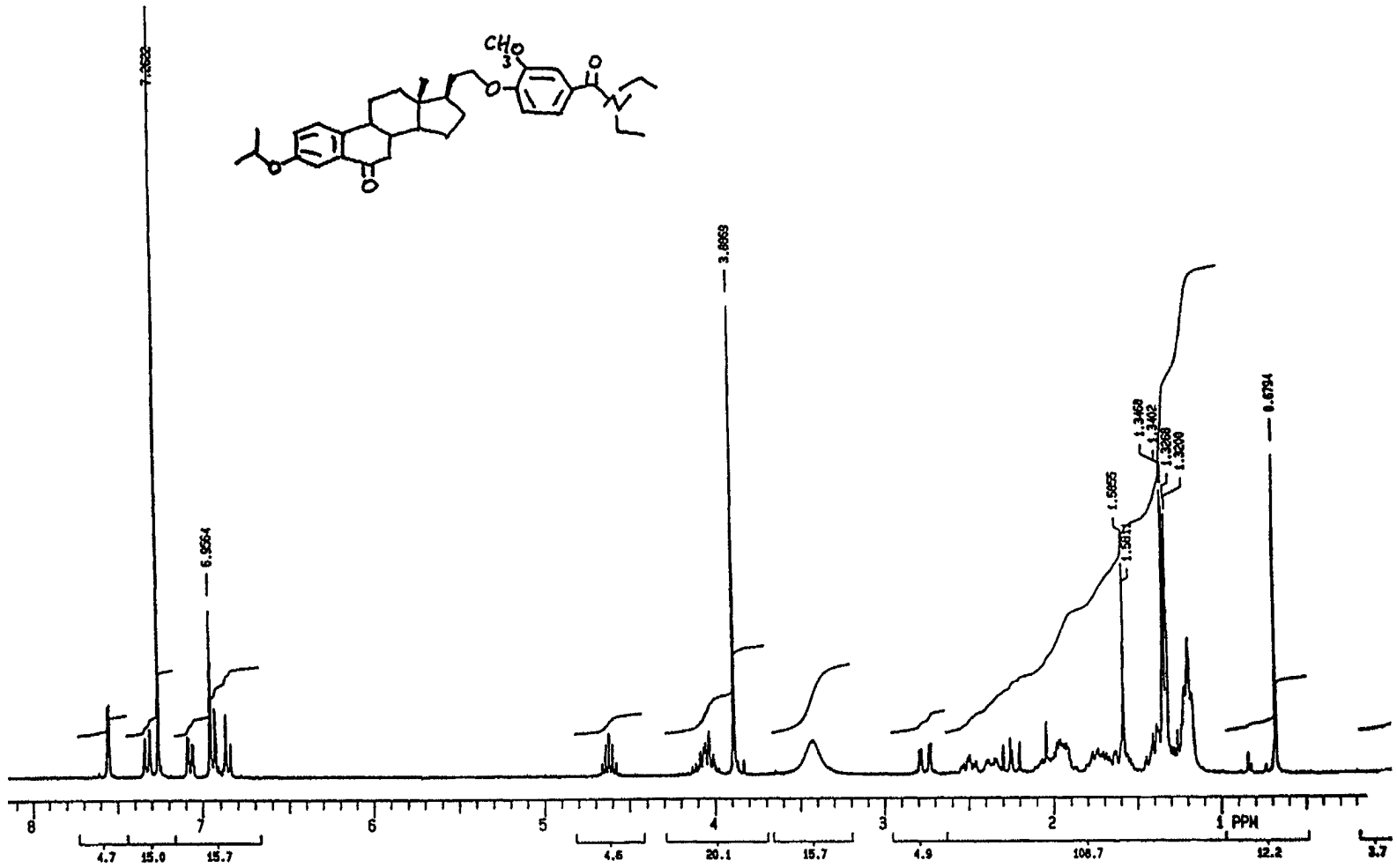

CH3O
O
O
O
O
N
7.4622
6.9564
3.8869
1.5855
1.5671
1.3469
1.3402
1.3268
1.3209
0.6794
8
7
6
5
4
3
2
1 PPM
4.7
15.0
15.7
4.6
20.1
15.7
4.9
108.7
12.2
3.7

FIG. 19

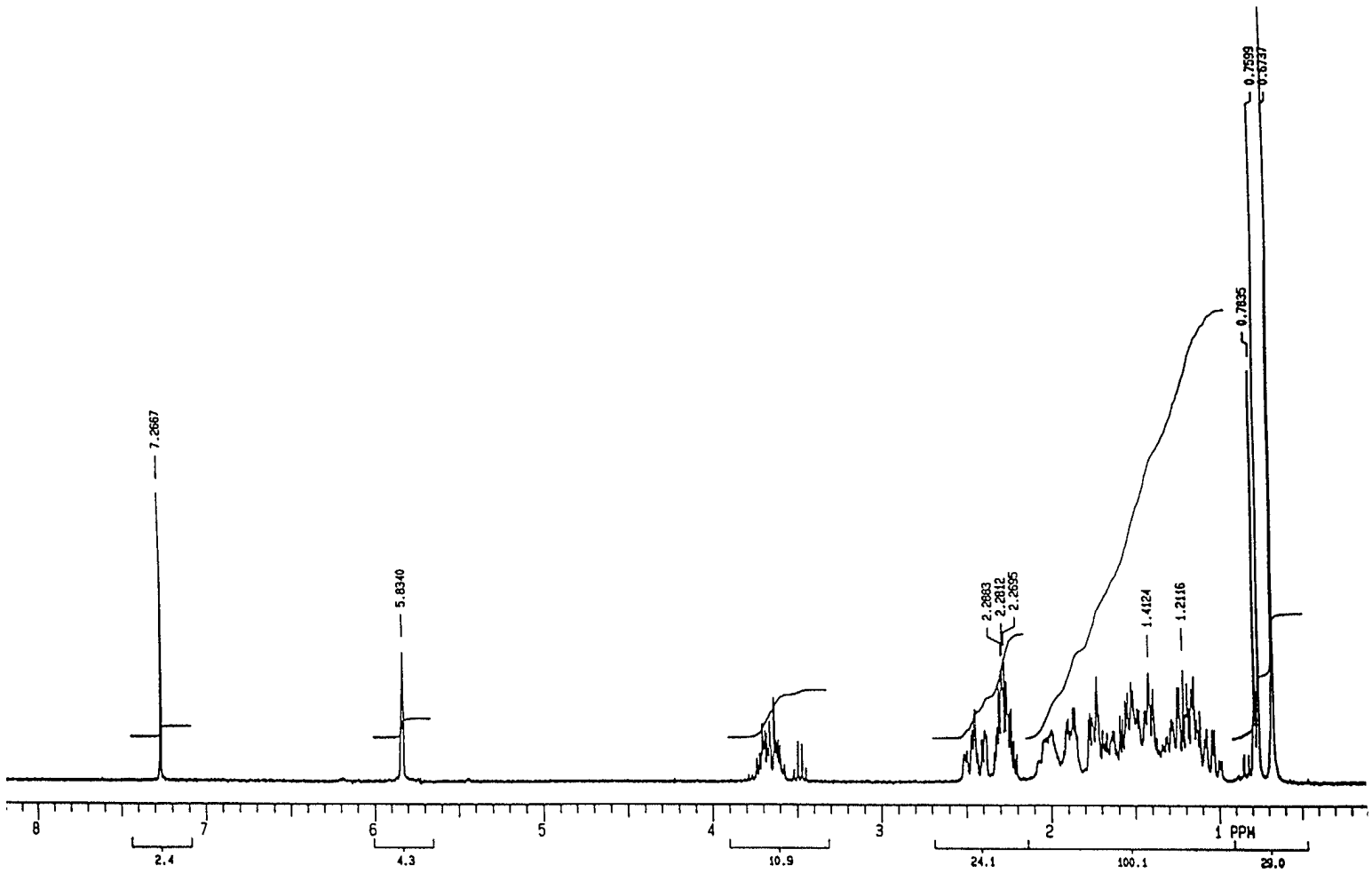

7.2667
5.8340
2.2883
2.2812
2.2695
1.4124
1.2116
0.7835
0.7599
0.7317
8
7
6
5
4
3
2
1 PPM
2.4
4.3
10.9
24.1
100.1
29.0

FIG. 20

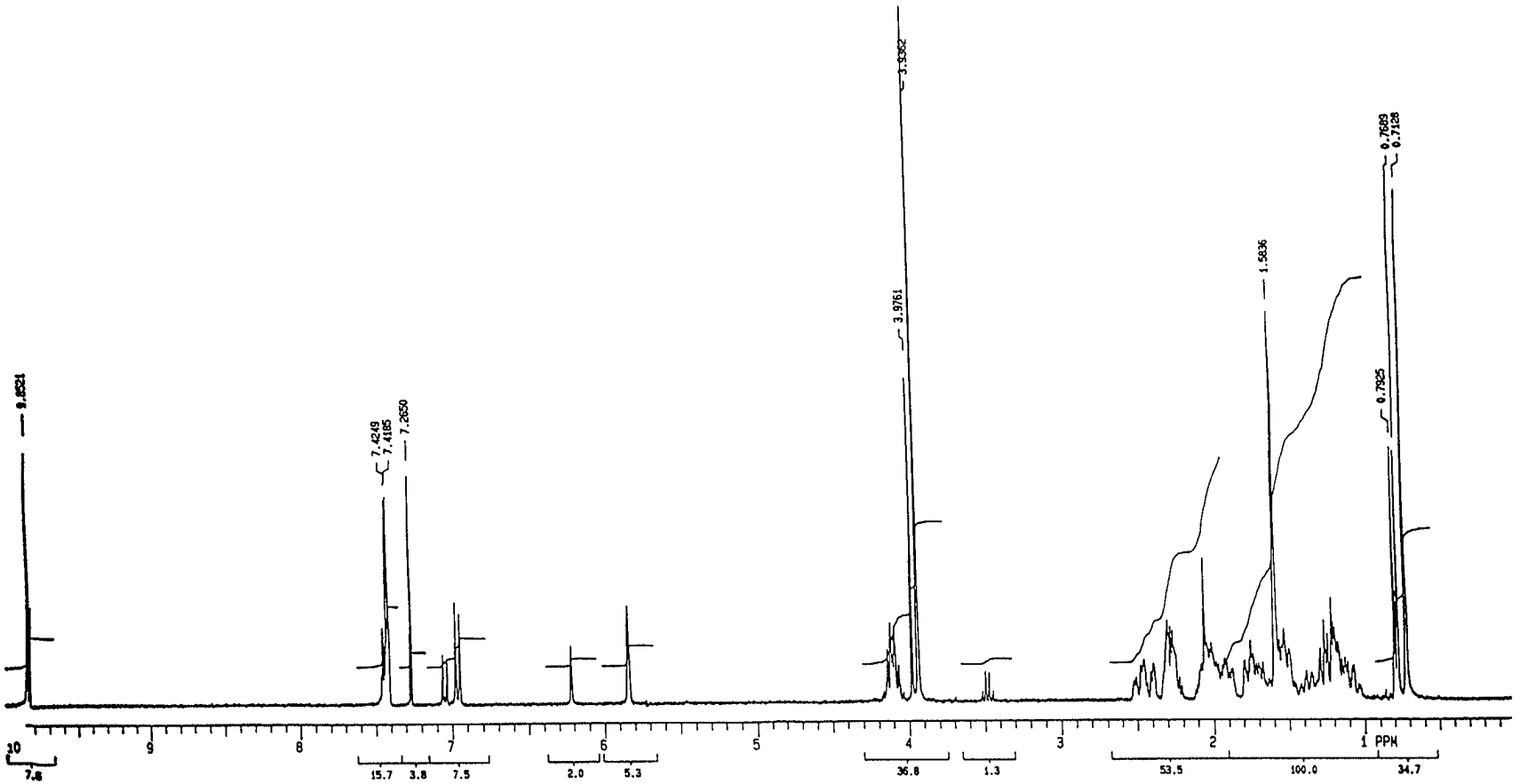

9.0521
7.4249
7.4185
7.2650
3.9382
3.9761
1.9836
0.7689
0.7128
0.7925
10
9
8
7
6
5
4
3
2
1 PPM
7.6
15.7
3.8
7.5
2.0
5.3
36.8
1.3
53.5
100.0
34.7

FIG. 21

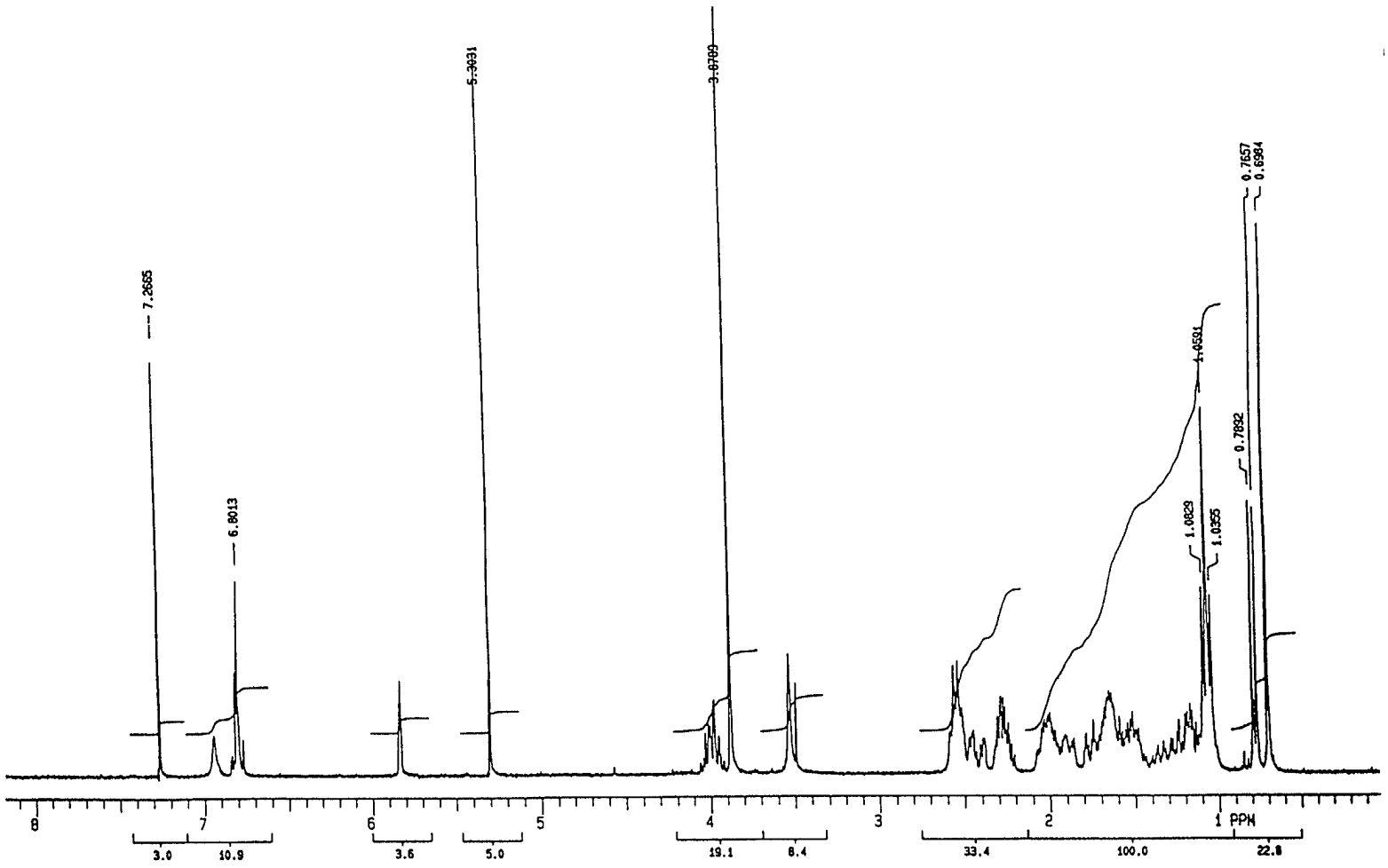

7.2665
6.8013
5.3031
3.8789
2.0531
1.0829
1.0355
0.7892
0.7657
0.6984
8
7
6
5
4
3
2
1 PPM
3.0
10.9
3.6
5.0
19.1
8.4
33.4
100.0
22.8

FIG. 22

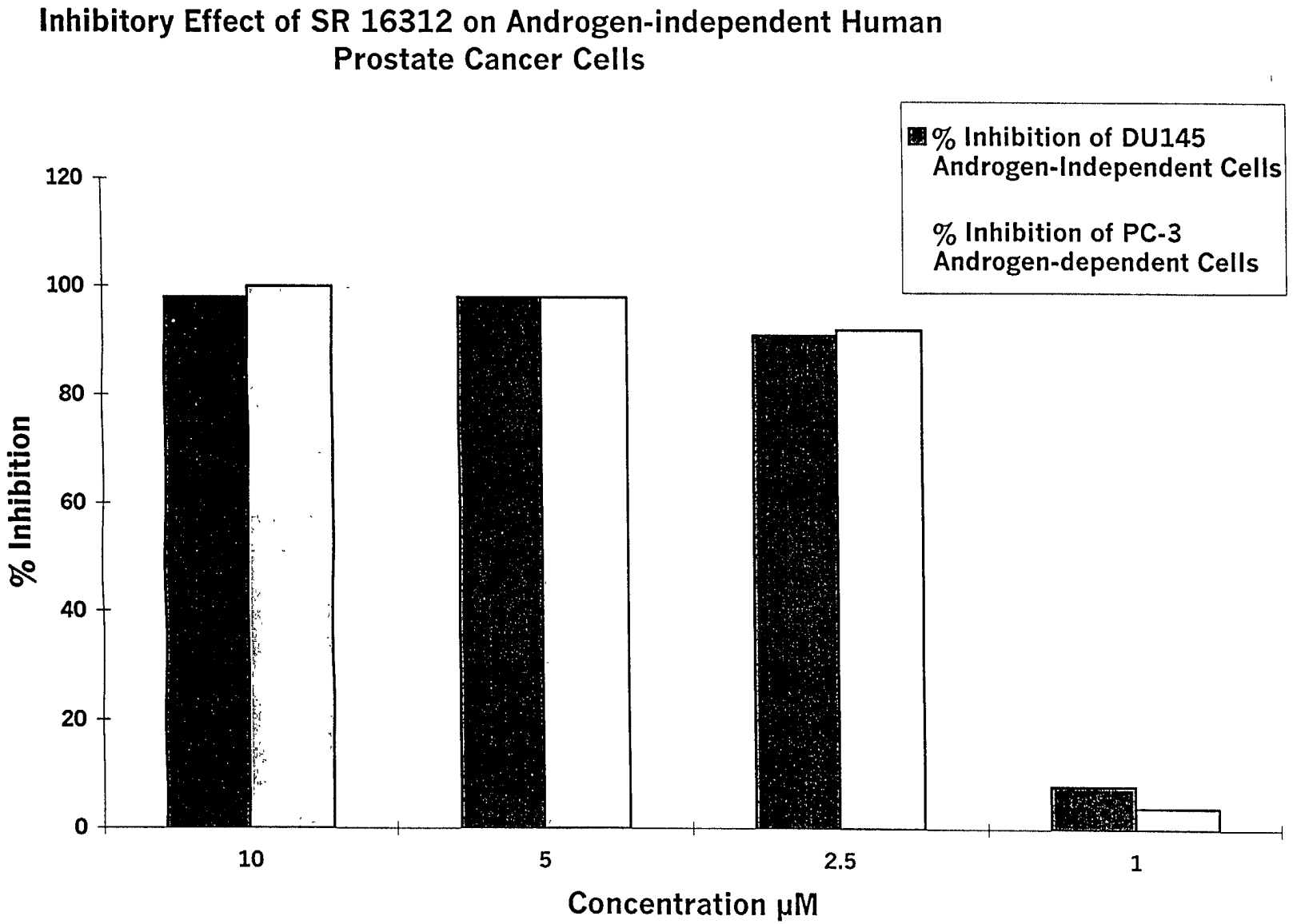

Inhibitory Effect of SR 16312 on Androgen-independent Human Prostate Cancer Cells
% Inhibition of DU145 Androgen-Independent Cells
% Inhibition of PC-3 Androgen-dependent Cells
% Inhibition
120
100
80
60
40
20
0
10
5
2.5
1
Concentration µM

FIG. 23